

In the Claims

1. – 26. (Cancelled)

27. (Currently amended) A method of producing a construct comprising a recombinant virus-like particle that infects a host organism for expression of the VLP and a first and second exogenous protein in the host organism and the exogenous proteins target[s] specific tissue in a target animal, the method comprising:

(a) providing a viral genome that infects the host organism wherein the host organism is yeast, bacteria, algae or an animal;

(b) isolating at least one viral coat protein sequence[[s]] from the viral genome that encodes for a capsid structure;

(c) inserting at least one first exogenous sequence encoding a protein or peptide of interest into the coat protein sequences, wherein the protein or peptide is antigenic or allergenic in the target animal;

(d) inserting at least one second exogenous sequence encoding a tissue-targeting protein sequence in the animal into the coat protein sequences, wherein the expressed targeting protein has affinity for a receptor on tissue in the target animal;

(e) cloning the viral coat protein sequences comprising the first and second exogenous sequences into an appropriate vector for infection of the host organism; and

(f) transforming ~~a yeast, bacterial or algae~~ the host organism for expression of the recombinant virus-like particle and exogenous peptides or proteins therein, wherein the host organism and target animal are not the same.

28. – 29. (Cancelled)

30. (Currently amended) The method of claim 27, wherein more than one first exogenous sequence[[s]] is inserted.

31. (Previously presented) The method of claim 27, wherein one or more of the second exogenous sequences has the function of targeting the expressed recombinant virus-like particle to a specific location.

32. (Original) The method of claim 27, wherein more than one viral coat protein is isolated.

33. (Currently amended) A recombinant virus-like particle produced by the method of claims 27, 29, 30, 31 or 32.

34. (Currently amended) A genetic construct comprising at least one nucleotide sequence encoding at least one viral coat protein from a virus that infects a host organism and for expression in the host organism, at least one first exogenous sequence encoding for an antigenic or allergenic protein effective in a target animal, wherein the antigenic or allergenic protein is for displaying on the expressed viral coat protein and at least one second exogenous sequence encoding a tissue-targeting protein having affinity for tissue in the target animal and for displaying on the expressed viral coat protein, wherein the expressed tissue-targeting protein has the function of targeting the expressed genetic construct to a specific location on tissue in the target animal and wherein the host organism and target animal are not the same.

35. (Original) The construct of claim 34, wherein more than one viral coat protein has been modified to display foreign proteins or peptides.

36. (Cancelled)

37. (Original) The construct of claim 34, wherein the exogenous sequence is inserted into a region truncated to remove sequence unnecessary for virus-like particle self-assembly.

38. -40 (Cancelled)

41. (Withdrawn and currently amended) A method of using the construct of claim 34 as a vaccine ~~recombinant virus-like particle of claims 34-39 as a vaccine~~, comprising: (a) providing the recombinant virus-like particle as expressed in the host organism; and (b) administering the host organism it to a target animal subject.

42. (Withdrawn) The method of claim 41, further comprising: (a) infecting an organism with the recombinant virus-like particle of claim 40; and (b) orally feeding the whole biomass of the infected organism to human or non-human animals.

43. (Withdrawn) The method of claim 42, wherein the biomass is processed for uniform dosing.

44. (Withdrawn) The method of claims 41-43, wherein the biomass is freeze dried.
45. (Withdrawn) The method of claims 41-43, wherein the biomass is encapsulated.
46. (Withdrawn) The method of claims 41-46, wherein the vaccine is used as a treatment for allergy.
47. (Withdrawn) The method of claim 41, wherein the vaccine is administered by injection.
48. (Cancelled)